IN THE CLAIMS

Claim 1 (original): A delivery system for delivery and deployment of a self expanding stent to a desired vascular location of a patient, the system comprising;

a catheter shaft having a proximal end and a distal end, the distal end of the shaft defining a reception space for receiving a self expanding stent, the stent having a reduced diameter delivery configuration;

an inner core engagable with the proximal end of the stent;

an operator handle for movement of the catheter shaft relative to the inner core to deploy the self expanding stent;

a stabiliser component;

the inner core being fixed to the stabiliser component, at least during deployment of the self expanding stent.

Claim 2 (original): A delivery system as claimed in claim 1 wherein the inner core has an abutment which is engagable with the proximal end of the stent to deploy the stent.

Claim 3 (original): A delivery system as claimed in claim 2 wherein the inner core has a reduced diameter distal portion extending distally of the abutment at least partially through the stent in the reduced diameter delivery configuration of the stent.

Claim 4 (original): A delivery system as claimed in claim 3 wherein the inner core forms a tubular member in the region of abutment.

Claim 5 (original): A delivery system as claimed in claim 4 wherein the inner core has high compressive stiffness.

Claim 6 (original): A delivery system as claimed in claim 5 wherein the inner core is of a composite, or a metallic construction.

Claim 7 (original): A delivery system as claimed in claim 1 wherein the catheter shaft comprises a distal sheath and a stent is frictionally coupled to the distal sheath in the delivery configuration.

Claim 8 (original): A delivery system as claimed in claim 7 wherein the inner core has an abutment which is engagable with the proximal end of the stent to decouple the stent and distal sheath to deploy the stent.

Claim 9 (currently amended): A delivery system as claimed in claim 1 ~~any of claims 1 to~~ 8 wherein the catheter shaft comprises a distal sheath portion and a proximal shaft portion, the diameter of the proximal shaft portion being smaller than the diameter of the distal sheath portion.

Claim 10 (original): A delivery system as claimed in claim 9 wherein the stabiliser component is disposed over the smaller diameter proximal shaft.

Claim 11 (original): A delivery system as claimed in claim 10 wherein the stabiliser comprises a tube and the diameter of the stabiliser tube is not greater than the diameter of the distal sheath of the catheter shaft.

Claim 12 (currently amended): A delivery system as claimed in claim 9 ~~any of claims 9 to 11~~ wherein the catheter shaft has a guidewire exit port which is located proximally of the distal end of the catheter shaft.

Claim 13 (original): A delivery system as claimed in claim 12 wherein the guidewire exit port is located proximally of the stent.

Claim 14 (currently amended): A delivery system as claimed in claim 12 ~~or 13~~ wherein the guidewire exit port is located proximally of the delivery sheath.

Claim 15 (currently amended): A delivery system as claimed in claim 12 ~~any of claims 12 to 14~~ wherein the guidewire exit port is located at a transition between the distal sheath and the reduced diameter proximal shaft portion.

Claim 16 (currently amended): A delivery system as claimed in claim 12 ~~any of claims 12 to 15~~ wherein the guidewire exit port is located distally of the stabiliser component.

Claim 17 (currently amended): A delivery system as claimed in claim 12 ~~any of claims 12 to 16~~ wherein the guidewire exit port is configured to exit along an axis that is substantially parallel to a longitudinal axis of the distal sheath.

Claim 18 (original): A delivery system as claimed in claim 1 wherein the system comprises a guidewire and the sum of the diameter of the guidewire and the diameter of the proximal shaft is less than the diameter of the distal sheath.

Claim 19 (original): A delivery system as claimed in claim 1 wherein the sum of the diameter of the guidewire and the diameter of the stabiliser component is less than the diameter of the distal sheath.

Claim 20 (original): A delivery system as claimed in claim 1 wherein the inner core comprises a large diameter distal segment, a reduced diameter proximal segment , and a transition segment between the distal and proximal segments.

Claim 21 (original): A delivery system as claimed in claim 20 wherein the transition segment is proximal of the abutment region.

Claim 22 (original): A delivery system as claimed in claim 20 wherein the transition segment is distal of the exit port.

Claim 23 (original): A delivery system as claimed in claim 1 wherein the stent directly engages the distal sheath and is slidable relative to the sheath.

Claim 24 (original): A delivery system as claimed in claim 23 wherein the distal sheath is a composite with a low friction inner surface

Claim 25 (original): A delivery system as claimed in claim 24 wherein the distal sheath is reinforced to withstand the radial stresses of the stent in its constrained reduced diameter configuration.

Claim 26 (currently amended): A system as claimed in claim 1 ~~any of claims 1 to 25~~ wherein the inner core is fixed to a component of the delivery system.

Claim 27 (currently amended): A system as claimed in claim 1 ~~any of claims 1 to 26~~ wherein the component of the system to which the inner core is fixed comprises the handle.

Claim 28 (currently amended): A system as claimed in claim 1 ~~any of claims 1 to 27~~ wherein the stabiliser component is fixed to a procedural catheter.

Claim 29 (original): A system as claimed in claim 28 wherein a haemostasis gasket is provided between the stabiliser component and the procedural catheter.

Claim 30 (original): A system as claimed in claim 28 wherein the catheter is an introducer sheath.

Claim 31 (original): A system as claimed in claim 30 wherein the introducer sheath has an integral haemostasis gasket.

Claim 32 (original): A system as claimed in claim 28 wherein the procedural catheter is a guide catheter.

Claim 33 (original): A system as claimed in claim 32 wherein the guide catheter has a haemostasis gasket attachment.

Claim 34 (original): A system as claimed in claim 33 wherein the gasket is adjustable by the operator.

Claim 35 (original): A system as claimed in claim 34 wherein the gasket attachment is a Touhy Borst.

Claim 36 (currently amended): A system as claimed in claim 1 ~~any of claims 1 to 35~~ wherein the system comprises a procedural guidewire and the guidewire is fixed or fixable to the stabiliser component.

Claim 37 (currently amended): A system as claimed in claim 1 ~~any of claims 1 to 36~~ wherein the stabiliser component is length adjustable.

Claim 38 (currently amended): A system as claimed in claim 1 ~~any of claims 1 to 37~~ wherein the stabiliser component comprises at least two parts which are movable relative to one another.

Claim 39 (original): A system as claimed in claim 1 wherein the stabiliser component position is adjustable.

Claim 40 (original): A system as claimed in claim 39 wherein the stabiliser component is adjusted by rotation of a threaded element which provides a position control device.

Claim 41 (currently amended): A system as claimed in claim 1 ~~any of claims 1 to 40~~ wherein an intermediate component is provided between the stabiliser component and the inner core.

Claim 42 (original): A system as claimed in claim 41 wherein the intermediate component comprises the handle.

Claim 43 (original): A system as claimed in claim 41 wherein the intermediate component comprises at least one bridging piece.

Claim 44 (original): A system as claimed in claim 43 wherein the bridging piece extends through the wall of the proximal shaft.

Claim 45 (original): A system as claimed in claim 44 wherein the bridging piece projects laterally of the inner core and/or the stabiliser component.

Claim 46 (original): A system as claimed in claim 45 wherein the bridging piece projects radially between the inner core and the stabiliser component.

Claim 47 (original): A system as claimed in claim 1 wherein the stabiliser component and the inner core are directly mounted to one another.

Claim 48 (original): A system as claimed in claim 47 wherein the stabiliser component is melded to the inner core.

Claim 49 (original): A system as claimed in claim 48 wherein the stabiliser component is melded by a welding, gluing, joining, laminating, or bonding process.

Claim 50 (currently amended): A system as claimed in claim 47 ~~to 49~~ wherein the stabiliser component and the inner core are directly mounted to one another proximal of the distal outer sheath .

Claim 51 (original): A system as claimed in claim 50 wherein the stabiliser component and the inner core are directly mounted to one another proximal of the outer shaft.

Claim 52 (original): A system as claimed in claim 1 wherein the system includes a guidewire and the guidewire extends at least the length of the catheter shaft.

Claim 53 (original): A system as claimed in claim 52 wherein the inner core defines a guidewire lumen along the length thereof.

Claim 54 (currently amended): A system as claimed in claim 52 ~~or 53~~ wherein the system includes a lock for the guidewire.

Claim 55 (original): A system as claimed in claim 54 wherein the lock is located proximal of the handle.

Claim 56 (original): A system as claimed in claim 1 wherein the stabiliser component comprises a tubular element and the tubular element has a tapered distal end.

Claim 57 (original): A system ac claimed in claim 1 wherein the system includes a guidewire and the guidewire is located within the profile of the stabiliser component

Claim 58 (original): A system as claimed in claim 1 wherein the stabiliser component has a proximal opening to allow backflow of blood.

Claim 59 (original): A system as claimed in claim 1 wherein the stabiliser component extends substantially the length of the catheter shaft.

Claim 60 (original): A delivery system for delivery and deployment of a self expanding stent to a desired vascular location of a patient, the system comprising:

a catheter shaft having a proximal end and a distal end, the distal end of the shaft defining a reception space for receiving a self expanding stent, the stent having a reduced diameter delivery configuration;

an inner core engagable with the proximal end of the stent;

an external mounting for the inner core; and

an operator actuating element for the catheter shaft;

the operator actuating element being movable proximally of the external mounting for movement of the catheter shaft relative to the inner core to deploy the self expanding stent.

Claim 61 (original): A delivery system as claimed in claim 60 wherein the operator handle is a pull handle for pulling the catheter shaft proximally relative to the inner core to deploy the self expanding stent.

Claim 62 (currently amended): A delivery system as claimed in claim 60 ~~or 61~~ wherein the catheter shaft and the operating handle or interconnected by a connector.

Claim 63 (original): A delivery system as claimed in claim 62 wherein the connector extends proximally of the external mounting.

Claim 64 (original): A delivery system as claimed in claim 63 wherein the connector extends through the external mounting.

Claim 65 (currently amended): A delivery system as claimed in claim 62 ~~any of claims 62 to 64~~ wherein the connector comprises an elongate member.

Claim 66 (original): A delivery system as claimed in claim 65 wherein the elongate member comprises a pull wire.

Claim 67 (currently amended): A delivery system as claimed in claim 60 ~~any of claims 60 to 66~~ wherein the inner core is fixed internal of the external mounting.

Claim 68 (currently amended): A delivery system as claimed in claim 60 ~~any of claims 60 to 66~~ wherein a guidewire exit port is provided at the proximal end of the external mounting.

Claim 69 (original): A method for delivery and deployment of a self expanding stent comprising the steps of:

providing a delivery system comprising a catheter shaft having a proximal end and a distal end, the distal end of the shaft defining an outer sheath having a reception space for receiving a self expanding stent, the stent having a reduced diameter delivery configuration;

an inner core engaging the proximal end of the stent;

an operator handle for movement of the catheter shaft relative to the inner core to deploy the self expanding stent;

introducing the delivery system into a vasculature of a patient;

delivering the stent delivery catheter to a region of interest;

fixing the inner core relative to the stabiliser component; and

deploying the self expanding stent by engaging the inner core with the proximal end of the stent.

Claim 70 (original): A method as claimed in claim 69 wherein the stent is deployed by sliding the outer sheath and stent proximally

to engage the inner core with the proximal end of the stent, the inner core engagement frictionally decoupling the stent and the sheath to deploy the stent.

Claim 71 (currently amended): A method as claimed in claim 69 ~~or 70~~ wherein the stent is frictionally coupled to the outer sheath in the delivery configuration.

Claim 72 (currently amended): A method as claimed in claim 69 ~~any of claims 69 to 70~~ comprising:

introducing a procedural guidewire into the vasculature;

advancing the guidewire to a region of interest; and

advancing the delivery system over the procedural guidewire.

Claim 73 (original): A method as claimed in claim 72 wherein the method is of the rapid exchange type.

Claim 74 (currently amended): A method as claimed in claim 69 ~~any of claims 69 to 73~~ comprising the steps of:

providing an embolic protection filter; and

deploying the filter distal of the region of interest, in advance of introduction of the delivery system.

Claim 75 (original): A method as claimed in claim 74 wherein the filter is mounted on the guidewire.

Claim 76 (original): A method as claimed in claim 74 wherein the filter is mountable to the guidewire.

Claim 77 (currently amended): A method as claimed in claim 69 ~~any of claims 69 to 76~~ wherein the region of interest is a region of stenosis in an arterial vessel having a tortuous passageway leading thereto.

Claim 78 (original): A method as claimed in claim 77 wherein the arterial vessel is a carotid artery.

Claim 79 (original): A method as claimed in claim 77 wherein the arterial vessel is a superficial femoral artery.

Claim 80 (original): A method as claimed in claimed 77 wherein the arterial vessel is a renal artery.

Claim 81 (currently amended): A method as claimed in claim 69 ~~any of claims 69 to 74~~ wherein the inner core is fixed relative to a component of the system.

Claim 82 (original): A method as claimed in claim 75 wherein the component is a guide catheter.

Claim 83 (currently amended): A method as claimed in claim 75 ~~or 76~~ wherein the component is a Touhy Borst.

Claim 84 (currently amended): A method as claimed in claim 69 ~~any of claims 69 to 77~~ wherein the system comprises a stabiliser fixed at a proximal end to the handle and the method comprises fixing the stabiliser to a component of the system.

Claim 85 (original): A method as claimed in claim 78 wherein the method comprises fixing the distal end of the stabiliser to a guide catheter.

Claim 86 (currently amended): A method as claimed in claim 78 ~~or 79~~ wherein the method comprises fixing the distal end of the stabiliser to a Touhy Borst.

Claim 87 (original): A method for delivery and deployment of a self expanding stent comprising the steps of:

providing a delivery system providing:

a catheter shaft having a proximal end and a distal end, the distal end of the shaft defining a reception space for receiving a self expanding stent, the stent having a reduced diameter delivery configuration;

an inner core engagable with the proximal end of the stent;

an external mounting for the inner core; and

an operator actuating element for the catheter shaft; and

moving the operating actuating element proximally of the external mounting to move the catheter shaft relative to the inner core to deploy the stent.

Claim 88 (original): A method as claimed in claim 87 wherein the operator handle is a pull handle and the catheter shaft is pulled proximally of the inner core to deploy the stent.